
NOTES ON *OLDENLANDIA* *FILICAULIS* AND *OLDENLANDIA TENUIS* (RUBIACEAE)

During an expedition to the northwestern portion of the state of Bolívar, Venezuela, in 1985, collections were made of a slender-stemmed, rubiaceous annual belonging to the genus *Oldenlandia*. An attempt to identify the material led to a study of *O. filicaulis* Schum. and *O. tenuis* Schum. Both species were described originally from the state of Piauí, northeastern Brazil, at a considerable distance from the Venezuelan locality.

As first described by Schumann (1889), *O. filicaulis* has heterostylous flowers with infundibuliform corollas 4 mm long, whereas *O. tenuis* has homostylous flowers with broader-tubed corollas 2 mm long equaling or slightly exceeding the calyx lobes. Further examination of these taxa showed that the isosyntypes of *O. filicaulis* (Blanchet 2703, 2742, and Martius 2476) have the stems much more branched with opposite branching and relatively smaller capsules, as contrasted with the rather few, flexuous, alternately branched stems and broader fruiting capsules of *O. tenuis*. Moreover, the isosyntypes of *O. filicaulis* have filiform stems, filiform-acicular leaves 0.1–0.3 mm wide, and minute capsules 1.2–1.5 mm wide, whereas *O. tenuis* has slightly broader stems, leaves up to 1 mm wide, sometimes varying to subspatulate and broadened above the middle, and broader capsules mainly 2 mm wide. The long-exserted anthers of the isosyntypes of *O. filicaulis*, furthermore, are in contrast to the sessile and included ones of *O. tenuis*.

The Venezuelan specimens from northwestern Bolívar state differ from both Brazilian taxa in having a mainly solitary, simple, or slightly branched stem above with more numerous and shorter internodes averaging (6–)8–12 on a stem and 13–17 mm long,

instead of, as in the Brazilian taxa, 3–8 to a stem and (12–)15–30 mm long. The leaves and calyx lobes of the Venezuelan plants have the margins more abundantly setulose-aculeate, but this character appears variable in the Brazilian taxa, from entire to varying numbers of aculeae.

Contrary to Schumann's description of the corolla length of 4 mm for *O. filicaulis*, examination of isosyntype and other material of this species showed corolla length variation usually to be 2–2.5 mm. A specimen of *Ule* 7419 (F) from Bahia showed the longest length of 2.5–3 mm. In general, the corolla of *O. filicaulis* has a narrower, more elongated infundibuliform corolla tube than *O. tenuis*.

When compared with the corollas of the Brazilian taxa, the Venezuelan plant agrees with the type of corolla exhibited by *O. tenuis*, showing a broad tubular, short corolla 1.8–2 mm long, which is only slightly longer than the calyx, with sessile anthers included at the summit of the corolla tube. Additionally, the Venezuelan specimens also have the alternate branching of the stem characteristic of *O. tenuis*. A specimen collected by Otto Huber *et al.* 1399 (VEN) from Territorio Federal Amazonas, Venezuela, has the short broad corolla and sessile, included anthers of *O. tenuis*, but the slender stem with opposite branches, few internodes, and minute capsules, sharing the characters common to *O. filicaulis*.

If one relies on the characters of few-branched stems with alternate branching, sessile included anthers, and capsules ca. 2 mm wide, then most of the specimens of this *Oldenlandia* complex would fall into *O. tenuis*. Such specimens are known from the Brazilian states of Ceará, Piauí, Parahyba, Rio Bran-

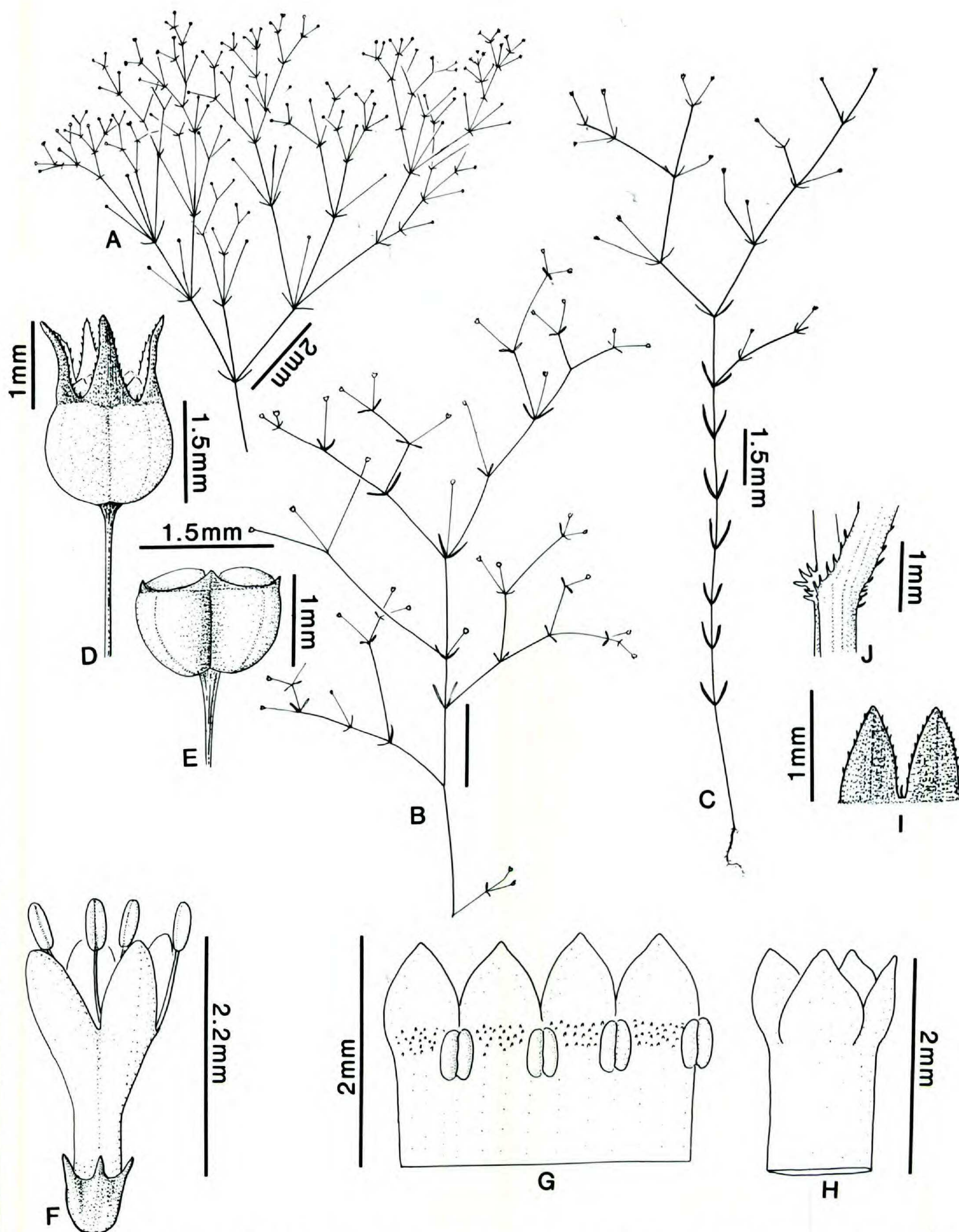


FIGURE 1.—A. Habit of *Oldenlandia filicaulis*, showing much-branched, opposite lateral axes (isotype, Blanchet 2742).—B. Habit of *Oldenlandia tenuis*, showing alternately branched, main lateral axes (Drouet 2244).—C. *Oldenlandia tenuis*, showing more numerous and shorter internodes (Steiermark, Holst & Manara 131298).—D. Fruiting specimen of *O. tenuis*.—E. Fruit of *O. filicaulis*.—F. *Oldenlandia filicaulis*, flower, with calyx and corolla.—G. *Oldenlandia tenuis*, corolla, interior view.—H. *Oldenlandia tenuis*, corolla, exterior view.—I. *Oldenlandia tenuis*, showing 2 calyx lobes with squamelline gland (Steiermark et al. 131298).—J. *Oldenlandia tenuis*, base of leaf, showing aculeate margins.

co, and Terr. do Roraima, from Guyana, and from northwestern Venezuela, if we include the collections obtained in the latter area. *Oldenlandia filicaulis*, on the other hand, appears to be rarer and occurs in the Brazilian states of Piauí, Bahia, and Pará and in Venezuela from Territorio Federal Amazonas. Both taxa were collected from the Brazilian state of Piauí.

Although it is possible that only one variable species is represented among the specimens studied, the two taxa may be considered as separate and distinct until more intensive investigation has been completed.

KEY TO THE SPECIES

- 1a. Corolla slightly longer than the calyx, 1.8–2 mm long, broadly cylindric; anthers included, sessile; branching of stem alternate, irregular, with relatively few axes; capsule 1.5–2 mm wide; leaves 0.5–0.7(–1) mm wide, linear-subulate to subspatulate, sometimes broader near the middle; stem 0.5–0.7 mm thick *O. tenuis*
- 1b. Corolla ca. 2½ times longer than the calyx, 2–3 mm long, infundibuliform; anthers long exserted; branching of stem opposite, with numerous axes; capsule 1.2–1.5 mm wide; leaves 0.1–0.3 mm wide, linear-acicular, uniform in width; stem 0.3–0.5 mm thick *O. filicaulis*

***Oldenlandia filicaulis* K. Schumann, Mart.** Fl. Bras. 6(5): 271. 1889.

Specimens examined. BRAZIL. PIAUÍ: prope Utinga in Sertão fluvii Rio de San Francisco, *Blanchet* 2742 (isotypes, F, NY); ad Villa de Barra, *Blanchet* 2703 (photo of isotype at B; F, NY); in arenosis humidis ad praedium Serra Branca, *Martius* 2476 (M). PARAIBA: proximo ao mangue, Bahia de Traição, *Coehode Toraes*

2270 (NY). BAHIA: Remanso, *Ule* 7419 (F, K). PARÁ: Pará, Gurupá, campina da Serraria Xingú, *Silva & Rosario* 4989 (F, NY, VEN); Munic. de Almeirim, *Santos* 660 (NY); Visên, *Tavares* 7 (NY). VENEZUELA. AMAZONAS: between airport of Puerto Ayacucho and Samariapo, 5°37'N, 67°36'W, 75 m, *Huber, Cárdenas & Pijykko* 1399 (VEN, intermediate between *O. filicaulis* and *O. tenuis*).

***Oldenlandia tenuis* K. Schumann, Mart.** Fl. Bras. 6(5): 273. 1889.

Specimens examined. BRAZIL. CEARÁ: Lagoa do Tarape, Bairro de Bemfria, Fortaleza, *Drouet* 2244 (F, MO, NY); Ceará, *Freire Allamão* 23849 (F); Tapera, *Pickel* 402 B (NY); Tapera, *Reiss* 4023 (F); Fortaleza, *J. Huber* 48 (F). TERR. RORAIMA: Dormida, foothills of Serra da Lua, *Prance et al.* 9178 A (F, NY). PARAHYBA: terrenos litoraneos arenosos, *Coelhode Toraes* 2228 (NY, US). PIAUÍ: prope Buritisas towards Mocambo, *Martius* 2504 (photo of type from M at F, NY). RIO BRANCO: Serra do Mel, *Ule* 8327 (F). GUYANA: Rupununi: Manari, 3°28'N, 59°41'W, *Maas & Westra* 3676 (NY, U). VENEZUELA. BOLÍVAR: Dto. Cedeño, 74 km SW of Caicara del Orinoco, 7°10'–15'N, 66°25'–30'W, *Steyermark, Holst & Manara* 131298 (MO, VEN); 22.5 km SW of Caicara del Orinoco, SW of Sacuima, 7°36'N, 66°15'W, *Steyermark, Holst & Manara* 131226 (MO, VEN).

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LITERATURE CITED

SCHUMANN, K. 1889. *Martius*, Fl. Bras. 6(5): 271–273.

—*Julian A. Steyermark, Missouri Botanical Garden, P.O. Box 299, St. Louis, Missouri 63166, U.S.A.*